

Leading the Launch



IDAHO NATIONAL ENGINEERING AND ENVIRONMENTAL LABORATORY

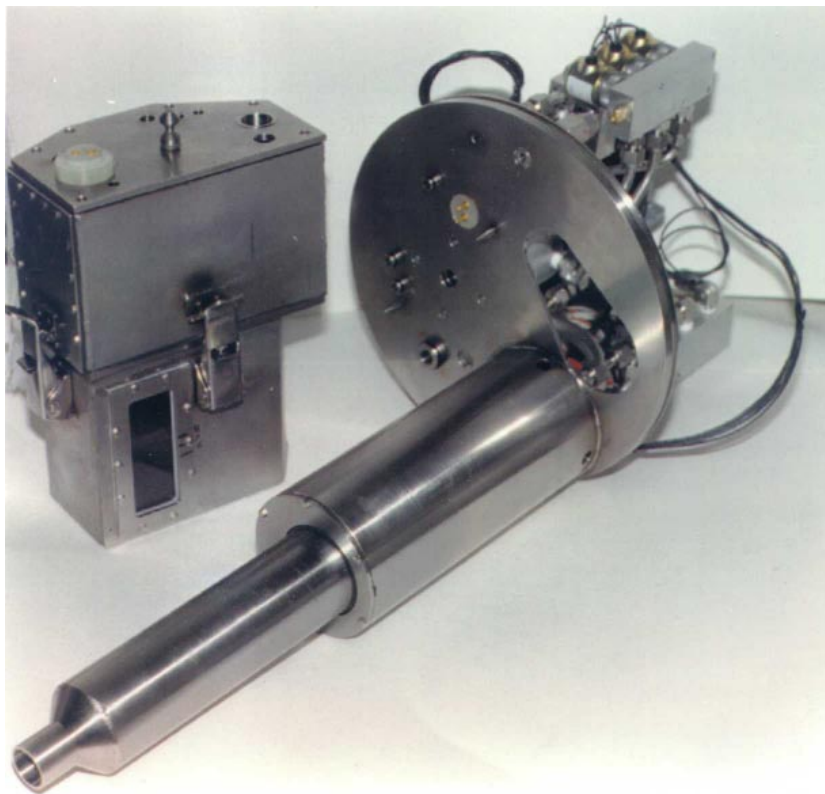
*Delivering a payload of
responsive technologies*



Technology Deployment



HOME OF SCIENCE AND ENGINEERING SOLUTIONS



Heel Sampling End Effector

Problem

INEEL's High-Level Waste (HLW) Pretreatment project needed to retrieve samples from underground storage tanks at the Idaho Nuclear Technology and Engineering Center to obtain characterization data required to safely store and treat sodium-bearing wastes.

Baseline Technology

INEEL has no alternative for directly sampling liquids in HLW tanks.

Innovative Technology

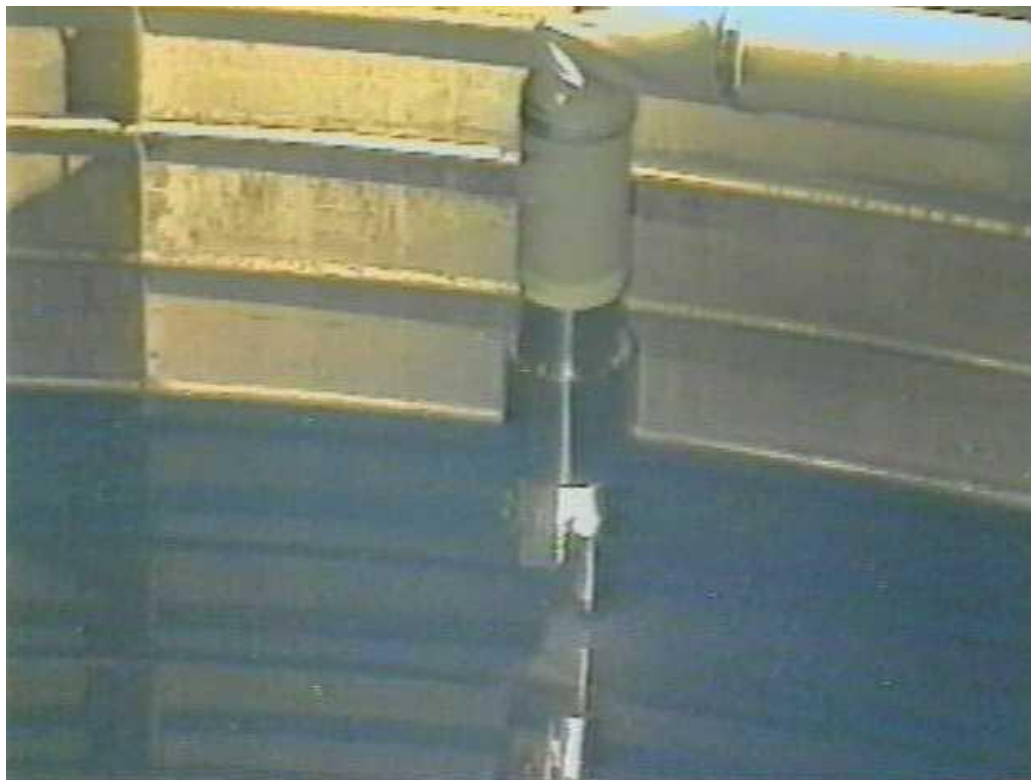
The Heel Sampling End Effector is an exchangeable tool that attaches to the Light Duty Utility Arm that allows remote collection of liquid samples.

Comparison

This tool allows sampling of tank contents without exposing workers to radioactive or hazardous materials.

Benefits

This tool enabled the project to obtain information required to design new treatment systems and model the future transfer of sodium-bearing wastes from the tanks to the treatment.



Heel Sampling End Effector

Problem

INEEL's Closure and Stabilization Activities project needed to sample tank residues to obtain characterization data required for closure of high-level radioactive waste (HLW) tanks at the Idaho Nuclear Technology and Engineering Center.

Baseline Technology

INEEL has no alternative for directly sampling solid residues in HLW tanks.

Innovative Technology

The Heel Sampling End Effector is an exchangeable tool that attaches to the Light Duty Utility Arm that allows remote collection of solid residues.

Comparison

This tool allows sampling of tank contents without exposing workers to radioactive or hazardous materials.

Benefits

This tool enabled the project to obtain characterization data required to develop waste stabilization processes and develop plans for tank closure.